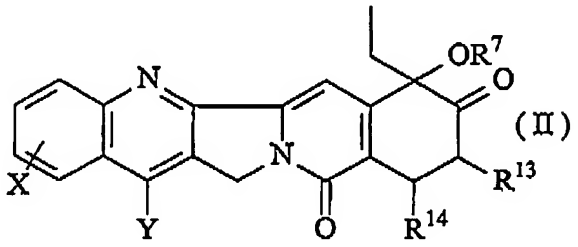
Application No. 10/608,207
Supplemental Amendment

IN THE CLAIMS

Please amend the claims as follows:

Claim 1. (Currently Amended) A camptothecin analog having the structure:



where

X and Y are each independently SH, S-C_{1-6} alkyl, NH-C_{1-6} alkyl, CHO, N_3,

-Z-$(CH_2)_a$-N-$((CH_2)_bOH)_2$, wherein Z is selected from the group consisting of O, NH and S, and a and b are each independently an integer of 2 or 3,

-Z-$(CH_2)_a$-N-$(C_{1-6}$ alkyl$)_2$ wherein Z is selected from the group consisting of O, NH and S, and a is an integer of 2 or 3, or

-CH_2-L, where L is halogen ~~(F, Cl, Br, I)~~, $^+N_2$, $^+(OR^1)_2$, $^+S(R^1)_2$, $^+N(R^1)_3$, $OC(O)R^1$, OSO_2R^1, OSO_2CF_3, $OSO_2C_4F_9$, C_{1-6} alkyl-C(=O)-, C_{4-18} aryl-C(=O)-, C_{1-6} alkyl-SO_2-, perfluoro C_{1-6} alkyl-SO_2- or C_{4-18} aryl-SO_2-, (where each R^1 independently is C_{1-6} alkyl, C_{4-18} aryl or C_{4-18} ArC_{1-6} alkyl);

R^7 is H; and

R^{13} and R^{14} are each H or combine to form a double bond;

~~and~~

~~n is an integer of 1 or 2,~~

and salts thereof.

Claim 2. (Cancelled)

Claim 3. (Original) The camptothecin analog of claim 1, wherein Y is -CH_2-L.

Claim 4. (Original) The camptothecin analog of claim 1, wherein L is selected from the group consisting of Cl, Br and I.

Claim 5. (Cancelled)

Claim 6. (Currently Amended) The camptothecin analog of claim 1, which is selected from the group consisting of ~~R~~ 20-R isomers, ~~S~~ 20-S isomers and mixtures thereof.

Claim 7. (Currently Amended) The camptothecin analog of claim 6, wherein the analog is the ~~S~~ 20-S isomer.

Claim 8. (Currently Amended) The camptothecin analog of claim 6, wherein the analog is the ~~R~~ 20-R isomer.

Claim 9. (Currently Amended) The camptothecin analog of claim 6, wherein the analog is an ~~S~~ 20-S rich mixture of ~~S~~ 20-S and ~~R~~ 20-R isomers.

Claim 10. (Currently Amended) The camptothecin analog of claim 6, wherein the analog is a ~~R~~ 20-R rich mixture of ~~S~~ 20-S and ~~R~~ 20-R isomers.

Claim 11. (Currently Amended) The camptothecin analog of claim 6, wherein the analog is a racemic mixture of ~~R~~ 20-R and ~~S~~ 20-S isomers.

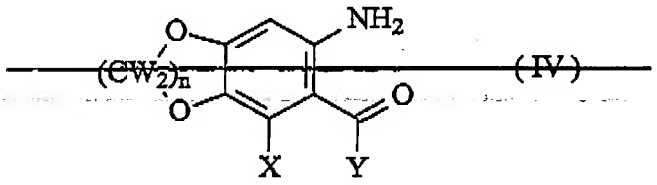
Claim 12. (Currently Amended) A method of treating leukemia or solid tumors comprising administering to a patient in need thereof, a therapeutically effective amount of the camptothecin analog of claim 1.

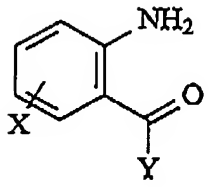
Claim 13. (Original) A pharmaceutical composition comprising the camptothecin analog of claim 1.

Claim 14. (Cancelled)

Claim 15. (Currently Amended) A method of preparing the camptothecin analog according to claim 1 comprising:

condensing a compound of formula ~~IV or~~ V

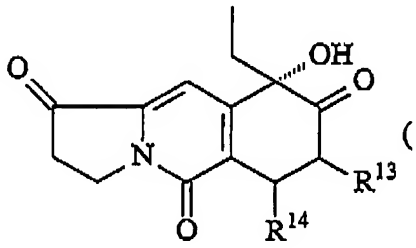




(V)

where X, Y, and W ~~and n~~ are as defined in claim 1,

with a tricyclic ketone of formula III

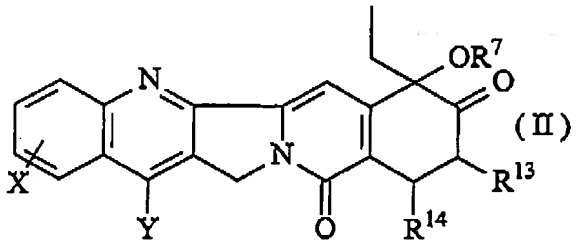


(III)

where R^{13} and R^{14} are as defined in claim 1

to form the camptothecin analog of claim 1.

Claim 16. (Currently Amended) A camptothecin analog having the structure:



(II)

where

X is NO_2, NH_2, H, F, Cl, Br, I, COOH, OH, O-C_{1-6} alkyl, SH, S-C_{1-6} alkyl, CN, NH-C_{1-6} alkyl, N(C_{1-6} alkyl)$_2$, CHO, C_{1-8} alkyl, N_3,

-Z-$(CH_2)_a$-N-$((CH_2)_bOH)_2$, wherein Z is selected from the group consisting of O, NH and S, and a and b are each independently an integer of 2 or 3,

-Z-$(CH_2)_a$-N-$(C_{1-6}$ alkyl$)_2$ wherein Z is selected from the group consisting of O, NH and S, and a is an integer of 2 or 3,

-CH_2-L, where L is halogen ~~(F, Cl, Br, I)~~, $^+N_2$, $^+(OR^1)_2$, $^+S(R^1)_2$, $^+N(R^1)_3$, $OC(O)R^1$, OSO_2R^1, OSO_2CF_3, $OSO_2C_4F_9$, C_{1-6} alkyl-C(=O)-, C_{4-18} aryl-C(=O)-, C_{1-6} alkyl-SO_2-, perfluoro C_{1-6} alkyl-SO_2- or C_{4-18} aryl-SO_2-, (where each R^1 independently is C_{1-6} alkyl, C_{4-18} aryl or C_{4-18} ArC_{1-6} alkyl); or

-$CH_2NR^2R^3$, where (a) R^2 and R^3 are, independently, hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkyl C_{1-6} alkyl, C_{2-6} alkenyl, hydroxy C_{1-6} alkyl, C_{1-6} alkoxy C_{1-6} COR^4 where R^4 is hydrogen, C_{1-6} alkyl, perhalo C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{3-7} cycloalkyl-C_{1-6} alkyl, C_{2-6} alkenyl, hydroxyl-C_{1-6} alkyl, C_{1-6}-alkoxy, or C_{1-6} alkoxy-C_{1-6} alkyl;

Y is SH, S-C_{1-6} alkyl, NH-C_{1-6} alkyl, -CHO, N_3,

-Z-$(CH_2)_a$-N-$((CH_2)_bOH)_2$, wherein Z is selected from the group consisting of O, NH and S, and a and b are each independently an integer of 2 or 3,

-Z-$(CH_2)_a$-N-$(C_{1-6}$ alkyl$)_2$ wherein Z is selected from the group consisting of O, NH and S, and a is an integer of 2 or 3, or

-CH_2-L, where L is halogen ~~(F, Cl, Br, I)~~, $^+N_2$, $^+(OR^1)_2$, $^+S(R^1)_2$, $^+N(R^1)_3$, $OC(O)R^1$, OSO_2R^1, OSO_2CF_3, $OSO_2C_4F_9$, C_{1-6} alkyl-C(=O)-, C_{4-18} aryl-C(=O)-, C_{1-6} alkyl-SO_2-, perfluoro C_{1-6} alkyl-SO_2- or C_{4-18} aryl-SO_2-, (where each R^1 independently is C_{1-6} alkyl, C_{4-18} aryl or C_{4-18} ArC_{1-6} alkyl);

R^7 is H; and

R^{13} and R^{14} are each H or combine to form a double bond;

~~and~~

~~n is an integer of 1 or 2,~~

and salts thereof.

Claim 17. (Currently Amended) A method of treating leukemia or solid tumors comprising administering to a patient in need thereof, a therapeutically effective amount of the camptothecin analog of claim 16.

Claim 18. (Previously Presented) A pharmaceutical composition comprising the camptothecin analog of claim 16.

Claim 19. (Cancelled)

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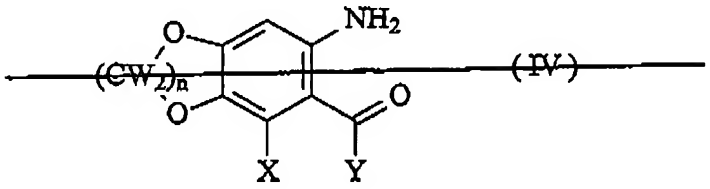
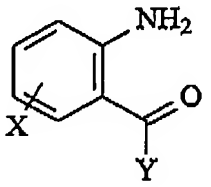
Claim 20. (Currently Amended) A method of preparing the camptothecin analog according to claim 16 comprising:

condensing a compound of formula ~~IV or~~ V

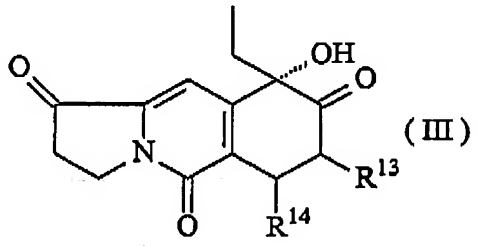


~~(IV)~~



(V)

where X, Y, and W ~~and n~~ are as defined in claim 16,
with a tricyclic ketone of formula III



(III)

where R^{13} and R^{14} are as defined in claim 16
to form the camptothecin analog of claim 16.